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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,579	03/07/2002	Koichi Okada	1761.1019	7927

21171 7590 05/20/2004

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

AURORA, REENA

ART UNIT PAPER NUMBER

2862

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,579

Applicant(s)

OKADA ET AL.8

Examiner

Reena Aurora

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 3 and 5 - 23 is/are pending in the application.
- 4a) Of the above claim(s) 2, 3, 5 - 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17 - 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This communication is in response to election of species requirement received on 2/24/04.

Applicant's election of species III (claims 17 - 23) in Paper received on 02/24/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 2, 3 and 15 -16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Drawings

1. Figure 35 should be designated by a legend such as "--Prior Art--" because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 17 is objected to because of the following informalities: Applicant refers to a wireless transmitter in line 9 and line 17. If the wireless transmitter in line 17 is the same as the wireless transmitter in line 9, in that case the applicant should change the letter "a" in line 17 to word "said". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17 – 18 and 20 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior (AAPA) art in view of French et al. (6,535,135).

5. As to claim 17, AAPA (fig. 35) shows an anti-skid braking device for detecting a rotational speed of a wheel rotatably supported by an automotive body structure using a wheel support bearing assembly (53) rotatably supporting a wheel relative to an automotive body structure and comprising an outer member (51) having an inner peripheral surface formed with plural rows of raceways, an inner member (52) having raceways defined therein in face to face relation with the raceways in the outer member, plural rows of rolling elements (53) accommodated between the raceways in the outer and inner members, an electric generator (55) generating an electric power as one of the outer and inner members rotates relative to the other of the outer and inner members, and controlling a braking force in response to detection signal indicative of the rotational speed of the wheel including a pulsar ring (56) mounted on a rotary member of a wheel which serves as the inner member making up a part of the electric

generator (55); a sensor (57) mounted on a wheel support member (54) in face to face relation with the pulsar ring (56) and forming another part of the electric generator (55).

AAPA fails to show a wireless transmitter and a receiver and a controller installed on the automotive body structure for determining a control of a braking force in dependence on the sensor output signal and the radio field strength signal. French et al. (hereinafter referred to as French) discloses a bearing with wireless self powered sensor unit including a wireless transmitter (D, fig. 1) and receiver (E) operable to transmit a signal from the sensor by way of a radio wave wherein it would be obvious to one of ordinary skill in the art that radio wave being a feeble radio wave since a feeble radio wave enlarges bandwidth of frequencies and the receiver receiving the feeble radio wave detects the output signal and a radio field strength signal and a controller (68, fig. 3) installed on the automotive body structure for determining a control of a braking force in dependence on the sensor output signal and the radio field strength signal. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of AAPA with the teachings of French such that provision of a wireless transmitter will make the device more flexible such that the receiver does not have to be directly connected to the transmitter and therefore eliminates the need to maintain the cable connecting the transmitter to the receiver.

6. As to claims 18 and 21, AAPA fails to show a controller including a software program describing procedures to determine the control of the braking force in dependence on the sensor output signal and the radio field strength signal, a computer capable of executing the software program. French discloses a controller (68, fig. 3)

determining the control of braking force in dependence on the sensor output signal and the radio field signal (col. 6, lines 3 - 26). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of AAPA with the teachings of French such that provision of a controller for processing the signals received from the sensor and further evaluating the signals for accurately determining any deteriorating condition.

7. As to claim 20, AAPA fails to show a transmitter transmitting the feeble radio wave by frequency modulating the sensor output signal, and the receiver detecting the sensor output signal and the radio field strength signal by demodulating the feeble radio wave. French discloses a transmitter transmitting the feeble radio wave by frequency modulating the sensor output signal, and the receiver detecting the sensor output signal and the radio field strength signal by demodulating the feeble radio wave (col. 6, lines 27 - 31). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of AAPA with the teachings of French such that transmitting a feeble radio wave by frequency modulating the sensor output and the receiver receiving the detected sensor put and is tuned to the radio frequency of the transmitter and enlarges the bandwidth of the frequencies.

8. As to claim 22, AAPA discloses a pulsar ring (56, fig. 35) mounted on a rotation side bearing assembly supporting the wheel rotatably, and the sensor (57) is mounted on a stationary side of the bearing assembly.

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9. As to claim 23, the method steps of claim 23 can obviously be carried out by the structure stated in claim 17. Therefore, the method of claim 23 is rejected on the same grounds as of claim 17.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior (AAPA) art in view of French et al. (6,535,135).

as applied to claim 17 above, and further in view of Minarczik et al. (5,790,631).

11. As to claim 19, AAPA and French fail to disclose controller determining the control in reference to a voltage of a duplex signal. Minarczik et al. (hereinafter referred to as Minarczik) discloses a wireless transceiver wherein having a duplexer, which radiates modulated signal to provide wireless broadcast (col. 7, lines 48 - 50).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of AAPA with the teachings of French and further with the teaching of Minarczik such that provision of a duplexer which radiates modulated signal would be able to provide wireless broadcast of the sensor signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 571-272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Reena Aurora


N. Le
Supervisory Patent Examiner
Technology Center 2800